

# San Francisco Bay Conservation and Development Commission

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January 31, 2020

**TO:** All Commissioners and Alternates

**FROM:** Lawrence J. Goldzband, Executive Director (415/352-3653; [larry.goldzband@bcdc.ca.gov](mailto:larry.goldzband@bcdc.ca.gov))  
Peggy Atwell, Director, Administrative & Technology Services (415/352-3638; [peggy.atwell@bcdc.ca.gov](mailto:peggy.atwell@bcdc.ca.gov))

**SUBJECT: Draft Minutes of January 16, 2020 Commission Meeting**

1. **Call to Order.** The meeting was called to order by Chair Wasserman at the Bay Area Metro Center, 375 Beale Street, Yerba Buena Room, First Floor, San Francisco, California at 1:06 p.m.

2. **Roll Call.** Present were: Chair Wasserman, Vice Chair Halsted, Commissioners Addiego, Ahn, Beach, Butt, Chan (represented by Alternate Gilmore), Finn, Resources (represented by Alternate Eckerle), Lucchesi (represented by Alternate Pemberton), McGrath, Peskin, Pine, Ranchod, Sears, Techel (departed at 3:02 p.m.), Wagenknecht (departed at 3:02 p.m.) and Governor's Appointee (represented by Alternate Holzman). Senator Skinner, (represented by Alternate McCoy) was also present.

Chair Wasserman announced that a quorum was present.

Not present were Commissioners: Santa Clara County (Cortese), Contra Costa County (Gioia), Sonoma County (Gorin), Governor (Randolph), Senate Rules Committee (Showalter), Solano County (Spering), Department of Business Transportation & Housing (Tavares) and U.S. Environmental Protection Agency (Ziegler)

3. **Public Comment Period.** Chair Wasserman called for public comment on subjects that were not on the agenda. (No speakers were announced)

Chair Wasserman moved to Approval of the Minutes.

4. **Approval of Minutes of the December 5, 2019 Meeting.** Chair Wasserman asked for a motion and a second to adopt the minutes of December 5, 2019.

**MOTION:** Vice Chair Halsted moved approval of the Minutes, seconded by Commissioner Gilmore.

**VOTE:** The motion carried with a vote of 16-0-2 with Commissioners Addiego, Ahn, Butt, Gilmore, Finn, Pemberton, McGrath, Peskin, Pine, Ranchod, Sears, Techel, Wagenknecht, Holzman, Vice Chair Halsted and Chair Wasserman voting, "YES", no "NO", votes and Commissioners Beach and Eckerle voting "ABSTAIN".



**5. Report of the Chair.** Chair Wasserman reported on the following:

Chair Wasserman announced: I would like to welcome Commissioner Beach who is here on behalf of the U.S. Army Corps of Engineers. Hopefully you will find it informational and occasionally enjoyable.

The good news is that increasingly climate change is in our newspapers and on our airwaves and being talked about. I did hear an interesting comment last night at a presentation on the book that I will probably talk about in future meetings, “An Optimist’s Telescope for a Reckless Future” by the woman who at one time was the Climate Change Director in the Obama White House.

And one of her comments on the debate was that a number of the candidates did want to talk about climate change; the reporters did not want them to talk about climate change or at least were not interested in pursuing those questions. We will see that change.

I have given each one of the Commissioners a copy of a small book which is a collection of Greta Thunberg’s speeches. I do think we are at a time when the children will lead us. And Greta is doing a very good job of that.

I do urge you to read it. It is a little repetitive because it is her speeches and they are simple and straight forward and an absolute call to action that we must all heed and help our other elected officials to heed.

I was also encouraged by an article this week in The Chronicle about a group of students in San Mateo County who organized first in their school to create a Ruby Bid Bridges Day. This pertains to civil rights. And then they organized in the County to have the County declare a Ruby Bridges Day. And they are now working statewide to have the Legislature declare a Ruby Bridges Day.

It is symbolic. Symbolism is important. But for me the most important symbolism is that we have a generation of children, that is elementary and middle-school children, who are on the rise in activism for issues that they believe are important and important to their generation and all generations.

A significant part of what we are going to be doing as we move more fully into our educational campaign wave is reaching out and hopefully encouraging others to develop curricula that will get children committed to the issue of figuring out how we are going to and how we are going to fund adaptation to rising sea level.

The one other article that I thought was encouraging is that Blackrock Investments, a very large hedge fund, is starting to grade and discriminate against companies that do not evaluate the effect of climate change on them.

One of our challenges is and will continue to be that we need to make sure that rising sea level is a significant and identifiable part of those kinds of evaluations and determinations and actions.

So, as that as momentum increases, we will get some significant different reactions in the media but more importantly amongst corporate and government America.

a. **Next BCDC Meeting.** We will hold our next meeting on February 6th, where we expect the agenda to include:

(1) A closed session to do an annual evaluation on the performance of the the Executive Director that originally was scheduled for this morning. This is a regular review. This is not caused by anything special or anything else. It is in closed session because that is the way you do personnel reviews. We will report out, but this is not because there are incidents of significance or any concerns although all of us can always improve, myself included.

(2) A briefing on updates to our Enforcement Program.

(3) A briefing on the East Contra Costa ART Project.

b. **Ex-Parte Communications.** Chair Wasserman continued: If you choose to you can make an ex-parte communication report on the record. You do need to do it in writing even if you report now. Anybody have any ex-parte communications they wish to express? (No Commissioners commented)

Executive Director Goldzband will now present the Executive Director's Report. We will grade you on this one. (Laughter)

6. **Report of the Executive Director.** Executive Director Goldzband reported: Thank you very much Chair Wasserman.

January 16, 1957 – 63 years ago today – is a very special day in modern, music history. On that day the Cavern Club opened for business in Liverpool. Many of you will recognize that the club is where the Beatles began to gain a following. I thought of that yesterday when I reviewed today's agenda. You see, it includes two major thought-provoking briefings on rising sea level and its ramifications on governance, transportation, at-risk communities, development and conservation. For all of you Beatles fans out there I think that we shall learn today that it will not be possible for us to be "Fixing a Hole" for the rain to come in, our cries for "Help" probably won't be too effective, and those people who live on high ground and believe that they won't be affected by rising sea level; they are just "Fools on a Hill." (Laughter)

a. **Budget and Staffing.** We have some new staff members and interns to introduce to you today. First, five sophomores from Cal are spending two weeks with us shadowing various staff members. They are Zoe Chan, Rachel Durney, Bianca Lei, Diego Morales and Rachel Schten. (All stood and were recognized). I had the pleasure to sit with them for an hour earlier this week and I am proud to say that none of them fell asleep. I hope they have learned a great deal and thank you for being here. Also, I want to introduce Dr. Julia Kelly (Stood and was recognized) who has started as a new staff member in the Sediment Unit.

I have a somewhat sad announcement to make. Our long-time staff counsel, John Bowers, retired at the end of last year. John is a Princeton Tiger who played football as an undergraduate and he moved on to the Big Ten to become a Wolverine and earn his law degree from the University of Michigan. John worked at BCDC for a dozen years following over 20 years at the Coastal Commission. Simply put, John has forgotten more about coastal zone law than just about anybody knows. We'll miss his legal acumen and his wry sense of humor.

Given his retirement I shall ask that you allow us to hire Michael Ng to replace John. Michael is a Rambling Wreck from Georgia Tech where he earned his undergraduate degree and then became an Aggie when he attended UC Davis Law School. Like we did with John twelve year ago we are poaching him from the Coastal Commission's legal staff. Michael has worked there for over four years during which he has reviewed permit applications and dealt with such issues as public access, the assessment of coastal hazards as exacerbated by sea level rise and environmental justice. Michael started his law career at Downey Brand and was a staff attorney for the City of South Lake Tahoe and we expect him to start in a couple of weeks.

Now from people to water: I would like Jessica Fain to provide you with some visual recollections of King Tides Weekend which happened this past weekend.

Planning Director Jessica Fain presented the following: Last weekend many of you may have heard there were King Tides around the region. You will have another chance to check them out in a few more weeks but I just wanted to use this as an opportunity to call your attention to a really great resource that we have. It is a collaboration between us and the Coastal Commission where it involves citizen scientists in collecting photos from around the region of these King Tides events.

And so you can go out and take photos, submit them and they all get collected into this wonderful database where you can click on them and see the different types that are happening. (Photos were projected onto the screen) This is a wonderful resource and it has been happening for a few years and it keeps growing each year.

If you are out there in February snap some photos and upload them and share this with folks that are out there. It is a really, great, public tool that we are happy to be collaborating with on with the Coastal Commission.

You can actually go to BCDC's home page and under the "What's New" section there is a link right there. That might be the easiest way to find it. You can just Google, "California King Tides" and you can get there as well.

Commissioner McGrath was recognized: This is a wonderful thing. In my early career I was exposed to and had to deal with the 1983 storms in California. We didn't have the record of those. It was a severe winter. There were huge waves but there was also a three-foot surge on and off for most of the months of December and January.

And had we a photographic record of that it would guide much of what we have to do. So eventually we will pick up a storm and a King Tide. This is really helpful and I really appreciate it.

Executive Director Goldzband continued: You will remember that the Seaport Plan Advisory Committee, commonly known as the SPAC, has been meeting to discuss how BCDC can best ensure that our ports will have the necessary capacity to continue to be huge economic engines for the Bay Area. Following its December 5th meeting BCDC staff has been working to fulfill requests by the Committee for additional research and analysis. This requires communicating with terminal operators and potential third-party, subject-matter experts to assess the feasibility of the draft cargo capacity estimates, reviewing environmental and

planning documents from past projects at the Port of Oakland and analyzing prior amendments to the Seaport Plan. To complete this work the SPAC is delaying its scheduled end-of-January meeting. At that rescheduled meeting the Committee will receive a presentation on the results of staff's efforts and, we hope with fingers crossed, finish its discussion on the updated cargo forecast. We will keep you informed and schedule a presentation by the SPAC after it finishes its deliberations.

And now for the good news! Last week BCDC received written confirmation that the State Office of Administrative Law has completed its review of your Bay Fill for Habitat and Environmental Justice Bay Plan amendments and found them to be in accordance with its requirements. We are now in the process of completing the administrative process to finalize the entire amendment process. I want to thank Marc, Clesi, Megan and Shannon for all of their hard work to ensure that OAL had no choice but to give its blessing.

I am proud to let you know that Brad McCrea and Erik Buehmann of our regulatory staff were star presenters last month at a statewide meeting of adaptation professionals in San Diego. They spoke at length about BCDC's permitting process in light of rising sea level and I received a couple of enthusiastic reports from attendees. And Erik has continued working in this vein by representing BCDC at Resource Secretary Crowfoot's agency-wide initiative to cut "green tape" – the Secretary's attempt to ensure that we all are working as efficiently as possible.

I have two final issues. First, in your packets today you will find a short memo from Commissioner Ahn that he wrote to the Speaker of the Assembly to update him on BCDC's progress in 2019. We want to thank Commissioner Ahn for ensuring that his appointing authority is kept fully informed.

And finally, I have in my hand a memo from Marc Zeppetello on Form 700. I urge you all in the strongest possible way to complete the form as soon as possible so that you won't be subject to public shaming by Chair Wasserman. And I want to congratulate Commissioner Pemberton who, I think, set a record for fastest to file.

That completes my report, Chair Wasserman, and I am happy to answer any questions.

Chair Wasserman asked: Are there any questions for the Executive Director? (No questions were voiced)

**7. Consideration of Administrative Matters.** Chair Wasserman stated: That will bring us to Item 7 Consideration of Administrative Matters. We have received a listing of them and Brad McCrea is here if anybody has any questions. (No questions were voiced)

**8. Public Hearing to Remove the Bay Plan Water-Related Industry Priority Use Area Designation from a Site West of Pacheco Creek Near Martinez Bay Plan Amendment No. 5-19.** Chair Wasserman announced: Item 8 is a public hearing on the proposed deletion of a Water-Related Industry designation from a site in Contra Costa County proposed for restoration. Cody Aichele-Rothman will make the staff presentation.

Coastal Planner Aichele-Rothman presented the following: Good afternoon and welcome to the Public Hearing for Bay Plan Amendment 5-19 regarding the "Water-Related Industry" Priority Use Area Designation at Pacheco Creek near Martinez. My name is Cody Aichele-Rothman and I am a Coastal Planner here at BCDC.

You will see in the Agenda that there are two items listed for this Bay Plan Amendment today.

To start things off with the first item I will be giving a presentation about the requested amendment followed by a public hearing and Commission discussion.

After that, I will present Staff Recommendation on the second item, the contract for the amendment.

As a reminder, the Commission voted to initiate this Bay Plan amendment on November 21, 2019 and the Descriptive Notice including the public hearing date was published the following day. The Staff Report was published on November 27, 2019. Today the Commission will hold a public hearing. A final staff recommendation, including response to comments, will tentatively be published in mid-February in advance of a Commission vote tentatively scheduled for February 20, 2020. This project will also require a permit from BCDC.

As a reminder, Bay Plan Priority Use Areas reserve shoreline areas for water-oriented uses to minimize the need to fill the Bay in the future for such uses and Priority Use Areas inland of BCDC's shoreline band are advisory only. The subject site shown here with a red star is currently designated as a Water-Related Industry Priority Use Area. It is one site in a much larger North Contra Costa Priority Use Area comprised of five separate sites.

In 1969 the North Contra Costa Priority Use Area was reserved for "water-related industry" because the features of the sites were seen as desirable for that future use based on other similar sites around the Bay. These features included easy access to intermodal transportation such as rail and highway, existing pipelines in the vicinity and the deep-water channel in Pacheco Creek leading inland to Walnut Creek.

In 1986 BCDC staff evaluated whether or not there was a continuing need for Water-Related Industry Priority Use Area designations around the Bay. Portions of the North Contra Costa Priority Use Area were identified as no longer being suitable or needed for water-related industry for the following reasons: "...a major problem to developing most of the site for water-related industry, which by nature includes heavy materials or products, ... and heavy processing facilities, such as oil refineries or storage tanks, are the weak soils under most of the site that provide very poor building foundation for heavy loads unless piles are driven to support the loads. This process, although possible, is extremely expensive and would be done normally only where there is a very large demand for developing heavy industry uses on the property... The weak soils are present because most of the site was historically part of the Bay and is under-laid by deep Bay muds and has a high-ground, water table." While the subject site and surrounding areas were trimmed of all of the tidal marsh habitats around the edges of the sites the Priority Use Area designation was not removed from the entire subject site because the north end of the site was used for sand mining activities.

In 2003 the Contra Costa County Flood Control and Water Conservation District (The District) purchased most of the site for restoration and flood control. The last parcel to be purchased was the northernmost portion of the subject site that had been previously used for drying dredged sediments. That activity ceased about 10 years ago. The sale was finalized at the end of 2019.

Because wetland restoration would not be consistent with the "water-related industry" priority use area designation, the District requests that BCDC amend the Bay Plan Maps 2 and 3 by removing the subject site from the "North Contra Costa" Water-Related Industry Priority Use Area. A detail of Bay Plan Map 2 is shown on the left and the proposed amendment to Map 2 is shown on the right.

And here is Bay Plan Map 3 as currently seen on the left and the proposed amendment on the right.

With one exception, the features of the subject site have not changed since staff's Baywide Water-Related Industry Analysis in 1986. Sand mining activities at the northernmost parcel ended about ten years ago. According to BCDC records there have been no proposals in the last 10 to 15 years to expand water-related industry uses at any of the North Contra Costa Priority Use Area sites. However, this amendment would not affect the other parcels in the priority use area.

As you can see on this slide the North Contra Costa site goes all the way from Martinez to the Concord Naval Weapons Reserve.

Although the District requests to remove the Priority Use Area designation from the 172-acre subject site, the Lower Walnut Creek Restoration Project extends beyond the boundary of the Priority Use Area and it will result in extensive public benefits. The Lower Walnut Creek Restoration Project as a whole seen here in this restoration plan would enhance and restore approximately 386 acres of coastal marsh habitat along Walnut and Pacheco Creeks, set back sections of the levees along the creeks seen further down the system, expand the flood retention capacity, grade existing seasonal wetlands in order to expand the tidal wetland habitat and create a migration space for tidal wetlands expansion and provide opportunities for future public-access amenities such as trail connections and an educational facility on the site.

The Lower Walnut Creek Restoration Project is currently in the permit filing process here at BCDC. Assuming the Commission votes to remove the Priority Use Area designation it will be one of the first BRITT projects before the Commission this spring.

BCDC's planning and permitting programs under the McAteer-Petris Act are exempt from the CEQA requirements to prepare an environmental impact report (EIR). Instead, BCDC's regulations provide for preparation of an environmental assessment which is considered the "functional equivalent" of an EIR.

Although there would be no direct, significant, adverse environmental effects from the Priority Use Area designation removal there were secondary or indirect effects identified in the environmental assessment that would be reduced to less-than-significant levels with mitigation. Most of the potential impacts of the proposed Lower Walnut Creek Restoration

Project would be temporary, short-term and site-specific due to construction-related activities and then possible maintenance of the project. These impacts would be localized to the proposed Lower Walnut Creek Restoration Project sites and may include limited, adverse effects during the construction process. However, compliance with applicable local, state, and federal standards as well as incorporation of mitigation measures and best-management practices would result in less-than-significant impacts.

At this time no written comments have been received.

Jill Sunahara is here representing the District and she is available for any questions about the Water-Related Industry Priority Use Area designation removal which is the focus of today's public hearing.

Thank you for your time and attention during this presentation.

Chair Wasserman announced: We will now open the public hearing with a motion and a second.

**MOTION:** Commissioner Pine moved to open the public hearing, seconded by Commissioner Eckerle.

Chair Wasserman continued: We have no speaker cards. Commissioners may ask questions after we close the public hearing. I would now ask for a motion to close the public hearing.

**MOTION:** Commissioner Pine moved to close the public hearing, seconded by Commissioner Eckerle. The motion carried by a voice vote with no objections or abstentions.

Chair Wasserman asked: Does anyone have any questions or comments? (No questions were voiced) No further action is needed. Thank you.

**9. Commission Consideration of a Contract with Contra Costa County to Remove the Bay plan Water-Related Industry Priority Use Area Designation from a Site West of Pacheco Creek near Martinez, Bay Plan Amendment No. 5-19.** Chair Wasserman announced: Item 9 is Commission consideration of a contract for the Contra Costa County Bay Plan Amendment 5-19. This is consideration of a contract to pay for staff costs to prepare Bay Plan Amendment 5-19. Cody Aichele-Rothman will present the staff's recommendation.

Ms. Aichele-Rothman stated: BCDC's regulations require that whenever a person or agency other than the Commission proposes that the Commission amend any of its planning documents that the Applicant shall be responsible for paying the Commission's full costs of processing and acting on the application.

Thus, staff recommends that the Commission authorize the Executive Director to execute a contract with the Contra Costa County Flood Control and Water Conservation District to provide the Commission with up to \$8,400 for costs to process proposed amendments to the San Francisco Bay Plan and to amend the contract as long as the amendment does not involve substantial changes to the scope of the contract.



**MOTION:** Commissioner Wagenknecht moved to approve the staff recommendation, seconded by Commissioner Eckerle.

Chair Wasserman asked: Any Commission discussion? And federal representatives can vote. (No comments were voiced)

**VOTE:** The motion carried with a vote of 17-0-1 with Commissioners Addiego, Ahn, Butt, Gilmore, Finn, Eckerle, Pemberton, McGrath, Peskin, Pine, Ranchod, Sears, Techel, Wagenknecht, Holzman, Vice Chair Halsted and Chair Wasserman voting, "YES", no "NO", votes and Commissioner Beach voting "ABSTAIN".

**10. Vote on Proposed Amendments to Commission Permit Application Fees.** Chair Wasserman announced: That brings us to Item 10, a Commission vote on proposed amendments to the Commission's permit application fees. We have dealt with this previously. But this is a serious decision that takes a lot of process. Chief Counsel Zeppetello will make the presentation.

Chief Counsel Zeppetello presented the following: As you may recall, on October 17th you voted to adopt amendments to the permit fee regulations. That vote followed issuance of a notice of proposed rulemaking last March, a 45-day public comment period, a public hearing before the Commission, and then a staff report that was presented at that October meeting that responded to comments.

After the vote I submitted the proposed amendments and the rulemaking package to the Office of Administrative Law (OAL) for review under the Administrative Procedures Act. And in late December a staff attorney from OAL called me to say that there was a problem because we had failed to recirculate the amendments for an additional public comment period because there had been changes made from the original proposal to the final amendments as adopted.

I had two discussions last summer with two different OAL attorneys on the issue of what the statute required, and I thought I heard that there was no need to recirculate unless the changes were beyond the scope of what was contemplated in the original notice. But what I was told in December was that the discussion of recirculating was only if you had to issue a new notice to start the whole process again if the changes were so substantial but, in fact, as long as the changes were more than typographical and minor corrections you needed to recirculate for 15 days.

Unfortunately, we only had issued the revised amendments for 13 days from when the staff report was mailed out prior to the meeting on October 17th.

So as directed, on December 24th we reissued the revised proposed amendments for an additional 15-day comment period. We did not receive any comments within the comment period. We did receive one comment letter late from the Marin Audubon Society. In brief, their comment was that they strongly supported the proposed reduction in fees for projects that receive grants from Measure AA funds and they also recommended that the same or similar adjustment be applied to wetland restoration projects generally, whether or not they received Measure AA funding.

The proposed amendments double the existing permit application fees and do so in two steps. The fees would, assuming OAL approval, be increased on July 1st of this year by 50 percent above what they are now and then two years later, on July 1st of 2022, they would go up the second step.

The proposed amendments also modify the timing for determining under the methodology in the existing regulations whether the fees should be adjusted based on a comparison of permit fee revenue and the total regulatory program costs.

And finally, there is a new fee reduction where fees would be reduced for projects that receive Measure AA grants. The project costs for use in determining the applicable fee would be reduced by the amount of the grant.

So with that the recommendation is that the Commission re-adopt the permit fees as shown in the attachment to the Staff Report for today's meeting. These amendments are identical to the amendments previously adopted by the Commission on October 17th.

I will say also that we do need to complete this process by March 1st of this year and get the package to OAL, otherwise it will be necessary to start the process again with a new notice of proposed rulemaking.

If you have any questions I will be happy to answer them. Thank you.

Chair Wasserman asked: Are there any questions for Marc? (No questions were voiced) I would entertain a motion to approve.

**MOTION:** Commissioner McGrath moved to approve the Staff Recommendation, seconded by Vice Chair Halsted.

Chair Wasserman added: I want to make a comment and a compliment to staff. Today gave people a second shot at the apple and obviously nobody took it, we have no speaker cards. But even last October there really was no significant opposition to what is a very significant increase in permit fees.

I think that is, in part, because it has been a long time since we had increased permit fees. But it is also because staff did a very good job in outreach, in thinking through the alternatives and to structuring it in a way that was fair to everybody but also increased the fees. And of course, those fees do not come to us – they go to the General Fund.

**VOTE:** The motion carried with a vote of 17-0-1 with Commissioners Addiego, Ahn, Butt, Gilmore, Finn, Eckerle, Pemberton, McGrath, Peskin, Pine, Ranchod, Sears, Techel, Wagenknecht, Holzman, Vice Chair Halsted and Chair Wasserman voting, "YES", no "NO", votes and Commissioner Beach voting "ABSTAIN".

Executive Director Goldzband commented: First of all, thank you for your compliments on staff. I want to say that when Marc received the call from the Office of Administrative Law and was appropriately disturbed given that he had spoken previously with two people who told him all was good – he sort of slunk into my office and said, I've got some bad news.

Now when your Chief Counsel comes into your office and says, I've got some bad news – so many things go through your mind. I will tell you that you have never seen an Executive Director happier when Marc explained what the bad news was. Given that we received just last

week the approval from OAL for the Bay Fill amendments and the EJ Amendment which Marc and the gang worked so hard on to make sure they were done – in the immortal words of Meatloaf; two out of three ain't bad. (Laughter)

So I am pretty happy with this and I think that we will be able to give you some good news within a month or so to make sure that all is well with the permit fees.

**11. Briefing on LAO Adaptation Report. Chair Wasserman announced:** That brings us to Item 11 which is a briefing on the Legislative Analyst's Office Adaptation Report. This will be presented by Rachel Ehlers of the Legislative Analyst's Office. Ms. Ehlers is the author of the report on the state's possible response to rising sea levels. Welcome.

Ms. Ehlers presented the following: Thank you so much. I am Rachel Ehlers with the Legislative Analyst's Office. I will be speaking about this report that our office put out in December. You should each have a copy as well as the two-page Executive Summary.

My plan today is to go pretty quick and especially quick through the background information in the report. This audience doesn't need me to make the case that sea level rise is coming and we should worry about it.

I will start with discussing who the LAO is and who I am and what are we here for? We are the independent, non-partisan, advisors to the Legislature. I am a legislative staffer. We are part of the Legislature but we work for the Senate and the Assembly, the Republicans and the Democrats. We provide them with impartial, policy advice. There are about 45 of us in our office, analytical staff including five in the Resources and Environmental Protection Unit.

My portfolio is water resources, fish and wildlife, coastal and delta issues.

Most of what we do between January and June is work on the state budget and help the Legislature work through what the governor is proposing. We provide analysis of what we think makes sense, what we think might not make sense, whether we think fiscal estimates are accurate or not and help the Legislature put together their own version of the budget.

Once the budget passes we have some time in the summer and fall to work on special projects. Some of those projects are at the request of the Legislature and some of those we come up with on our own for projects we think would be helpful to the Legislature and the public.

And this report I am talking about today falls in that second category. It is not something we were told to do by the Legislature. It is something we thought would be helpful.

Throughout the year we provide general, analytical support for the Legislature and help them with their bills and projects that they may be interested in.

And then separately another statutory responsibility we have is working on the ballot. We do the non-partisan descriptions of the propositions that you get in the mail.

This report is something that we took on our own without statutory requirement. We did this partly because there has been a lot of work in Sacramento in the past few years about climate change mitigation and greenhouse gas emission reduction. But the conversation is really starting to broaden in Sacramento towards adaptation. We know some amount of climate change impacts are coming; how are we going to deal with that? So we wanted to help broaden that conversation as well.

The report has a statewide focus. It is not just focused on the Bay but it does include the Bay. When we use the term “coastal” we include the Bay in that.

We did quite a bit of research. We talked to over 100 individuals, state government, local government, federal government, NGOs, research/community groups to inform the findings and also what research there is on this topic. We also looked at some surveys that have been done statewide of coastal professionals in California that helped inform some of our findings.

We work for the Legislature. We give them our recommendations then they determine the next steps. So we are not pushing this, lobbying for this. We don’t have an agenda other than informing our bosses who will be the ones who take the next steps.

We did use the BCDC tool—the Shoreline Flood Explorer—to develop this image in our report.

We all know that we face the threat of rising season tides and it will have a big impact on California and not just on those big mansions along the coast but also public infrastructure, natural resources and our economy.

Most of the work to deal with this has to happen at the local level. And that was really the focus of this report. Even though local, land-use decisions are made at the local level, a lot of public infrastructure is found at the local level—it is still an important statewide issue and so how can the state get involved?

The state has a vested interest in ensuring that preparation activity happens. There are a lot of benefits of acting now. It allows responses to be strategic and phased in. There are approaches that we can only do in the near term that will become less of an option as time goes by, including building up wetlands to help buffer wave action. It can be more affordable if local governments can phase the costs in and the state can phase the costs in over time.

So it is really a key window particularly over the next decade to get some of this work done.

But yet as we look across the state we see that local governments are really only in the early stages of preparing. There really is a lot of work happening but it is mostly in the vulnerability assessment, risk assessment beginning to develop some high-level, adaptation plans; not a ton of actual projects underway yet.

If we know that acting early makes sense and we know that the threat is coming – why haven’t we made as much progress?

We found six key challenges in our interviews and research that are inhibiting greater progress in this work. The first shouldn’t be a surprise to anybody – it is funding. We heard that in our interviews as well as it was the number one response in the survey data that funding constraints because of competing priorities and pretty limited funding sources coming from the state and federal government to do this work.

The second one is local government capacity. And this pertains to staffing which is also related to funding. This also involves expertise that even if local governments have the resources to hire additional staff there is just limited expertise in the state because it is such a new field.

The third category is lack of key information. Some of the types of information that we heard that folks are looking for is moving beyond knowing what the risks are; what do we do about it? Who can I call to help me figure out what are the different options, how much do they cost, what are the trade-offs between each of them and what are the economic impacts that we are facing? And then there are a lot of legal questions as well.

The fourth big challenge is a lack of forums for talking about these issues, learning from each other and particularly planning across jurisdictions. I know that is something that the Commission has been really involved in trying to help bring together in this region. But it is an issue across the whole state that the water doesn't know jurisdictional lines and it is really essential that this planning happen across jurisdictional lines because of the natural impacts that will happen by implementing measures without considering neighboring areas and the impacts on them. A seawall in one area will send the water somewhere else and it is eroding a beach or flooding somewhere else.

And we also have the human needs to use transportation corridors to get from one area to another. If one area takes a lot of action to try and prepare but the neighboring doesn't then that can affect your ability to get to work the next day. Planning across jurisdictions is really hard but really essential.

The fifth came up repeatedly about this challenge feeling like something that is really far away and really long in the future and just not a priority at this point for a lot of the public and therefore for their elected officials as well. We heard this repeatedly as a challenge throughout the state.

One of the biggest issues right now is housing and trying to build more housing units and have housing be more affordable for people in California. And sea level rise gets in the way of that. And planning for sea level rise gets in the way of that. If we are taking some of our housing stock off of the market because it will flood and taking some of our open land where housing could be built and determining that it is not an appropriate place to build housing – it complicates that issue.

And then finally - permitting. And I know that this is something that this group has really been engaged in. But we heard that a lot that the existing, regulatory system was not set up to address sea level rise and in particular was not set up to look at some of the natural infrastructure projects that need to be undertaken. And it takes a really long time to do these projects and we don't have the time for it to take as long as it is taking right now.

So what are we telling our bosses they should do about it? Our recommendations fall into four broad categories. We had 12 altogether in the report and I will hit them briefly.

The first category – fostering regional-scale adaptation. We recommend that the Legislature provide funding for regional adaptation, collaborative groups. This would not be just for coastal adaptation but climate adaptation writ large regardless of the challenge that communities are facing.

We are envisioning some modest funding that would fund a staff or two and some collaboration money to hold meetings and bring people together. A lot of this work needs to happen at the local level and should, but we think that the state can play an important role to

provide some of the infrastructure to have those groups set up. We are not explicit about who should run those in each area because it will vary based on the region and what entity is appropriate for doing that.

And then we would like to be able to provide some funding to those groups to develop regional/coastal adaptation plans as well; plans that really focus on cross-jurisdictional, regional issues. It is not just a list of each individual jurisdiction's wish list but issues that have broad, regional import; things like focusing on natural processes and natural resources as well as some of those human issues that cross-jurisdictional boundaries touch on as well as vulnerable communities. Those are the three priorities we lay out for those plans.

And then we need to put some money behind implementing those plans. We heard repeatedly that if you are going to tell us to come together and make a plan and then don't give us any assistance in implementing that plan it is not really worth it for us.

The second category is supporting local planning and adaptation projects. So while there is a big need for regional we also heard that there still needs to be individual jurisdictions doing this work and we need to continue to receive some state support for planning not just the overall adaptation plan but also project-specific plans, environmental permitting – getting those projects ready to go. So we recommend continued funding for that and more funding to implement the projects once they are planned.

We need to put some parameters around that. If we are using state money that taxpayers are paying, the benefits of the projects should benefit all taxpayers as well. This will include projects that can be piloted that we can learn from for the whole state, and projects that focus on public resources and public infrastructure.

And then if we are funding projects to learn about them we should make sure we are learning something about them and that this information is being gathered and shared.

So setting up systems and providing financial support to make sure that this monitoring, adaptive management and information sharing is happening is important.

The third broad category is the really important role for the state providing information, assistance and support. We recommend establishing a climate adaptation center; a brain trust so that there is some place that people can pick up the phone and call. It is not just a website with a whole bunch of information. It is how do we find out what works and who can we talk to help us work through this?

And this would be a center of information, but we also heard that it would be really important to have some regionally-placed representatives as well that people know that come to city council meetings with them and help present some of the information and be a local source of expertise for the challenges that a local area is facing.

One of the things that hasn't been really present in a lot of the plans that have been put together at local levels is an economic analysis of what are the risks we are facing to our local economy? And what are some of the economic trade-offs of some of the potential actions that we can take?

And that is just essential if you are trying to make decisions and defend those decisions to your constituents. So we think the state can help by developing a methodology that local areas can use and also some standardization across the state will help us as a state get a sense of the economic impacts and options as well.

And then there is the category of recommending that the state take a look at regulatory permitting processes and try and make them more efficient. And as was mentioned Secretary Crowfoot is running with that already so that is great. So we are hopeful that this might yield some progress in that area.

And the final category is enhancing public awareness. The first recommendation is that we are suggesting that the Legislature adopt statute that requires coastal flooding disclosures for real estate transactions.

We have them now in state law for earthquakes. We have them for wildfires. We have them for historical flooding. We think that this is important public information that should be part of property-purchase decision and there is actually more certainty about this than in an earthquake. So from a public-policy perspective we think this makes sense.

If the state takes on funding some of these additional plans and projects we think public engagement in that is really important and should be a key part of how those state programs are structured. We must have meaningful, public engagement to increase the public awareness but also to be sure that constituents, and particularly those from some of the vulnerable communities that may not traditionally have a seat at the table, that they are a part of making the decisions of how responses are going to be undertaken and that it is not being done to them but with them.

And our final recommendation is that the Legislature direct state departments to conduct a public-awareness campaign about sea level rise and development that locals can use to help broaden awareness and so that we are being cost efficient with public dollars and not having each jurisdiction have to develop these materials themselves.

So some final thoughts in terms of next steps for this report. As I said we present it to the Legislature and then they choose to implement what they want or not. We are not the deciders. We are the staff to the deciders. So they have a lot of options to start working on some of this. They could have individual members run individual policy bills to implement some of these recommendations. They could choose to include some of them in that State Budget Act. There is a lot of talk in Sacramento right now about a potential bond proposition to fund climate resilience activities, that of course would require public approval. The Legislature can direct state departments to undertake certain actions.

And then just from public awareness, having legislative hearings. There actually is one scheduled in Foster City February 7th by the Select Committee on Sea Level Rise and the Economy to start discussing some of these issues as well. So that can also help public awareness of the citizens but also the Legislature and the legislative members.

And we close the report in the same way I will close here which is that even if the state and the Legislature adopted all of the recommendations, we have in the report we wouldn't be done. There were issues that arose through our research but were beyond the scope of our report that really are going to need future, legislative attention and legal questions are a really big one.

Legalities came up a lot. We had questions about the nature of the responsibility of local governments to protect and to continue to serve in this changing reality. We had questions about defining what our statewide priorities and responsibilities are and how aggressive the state might want to be in enforcing some of its priorities.

Typically the state/local relationship is that the state provides carrots to local governments to do what we want them to do and that may be enough and maybe not – who knows? That is a future issue facing the state.

We have to be rethinking how and where we build and also how we rebuild after flooding happens. We are seeing changes in insurance markets in fire zones. There are insurance companies that are pulling out of whole regions and so how might that come into play with this climate challenge as well?

And then finally sea level rise isn't the only climate-related risk and challenge facing local governments or the state. So even though we chose to focus on that in this report it is going to be a bigger challenge facing the state and local communities.

That's it and I would be happy to answer any questions.

Chair Wasserman continued: Before we entertain questions I'm going to ask the one speaker that we have to come forward; Warner Chabot please.

Mr. Warner Chabot addressed the Commission: This morning Ms. Ehlers provided a very highly productive workshop with 55 Bay Area climate-adaptation leaders. BCDC generously provided the space here. The briefing was co-hosted by SFEI, the Bay Planning Coalition and collaborations of local government staff. Those two collaborations were BayCAN, a collaboration of planning and policy works across the Bay Area, and CHARG, a collaboration of local public works and flood management officials.

Staff from Senators Hill and Wieckowski and Assemblymen Mullin and Quirk's office also attended the meeting.

The participants represented a broad cross-section of leaders from the business, local government, NGO, environmental justice and science and technical communities.

There was great appreciation for this report. There was recognition that it did two things. The first thing it did was it actively framed the challenges that the Bay Area faces namely that most shoreline-adaptation issues are regional but a vast number of the solutions are local, land-use decisions and that the one of the major hurdles facing local leaders is their limited capacity to have access to the necessary science and technical data and the ability to do the necessary multi-agency, multi-jurisdictional collaboration to come up with solutions that address the regional problem and the needs that are occurring at a local level.



Secondly there was a broad agreement and appreciation that this report provided a specific set of actions to expand, accelerate and support the local capacity to do that very regional collaboration.

There is also acknowledgement of the vast number of activities that are already being undertaken, some of them at the direction of Chairman Wasserman and Executive Director Larry Goldzband and being led highly effectively by Jessica Fain your planning director to try to bring together those various stakeholders to come up with a set of process and principles by which the local and regional entities can collaborate.

Please remember that this report is focused not on climate adaptation overall; it is a focus on shoreline adaptation and that is the shoreline of the entire Pacific Coast of California and San Francisco Bay.

I want to stress one powerful statistic. According to the USGS and the Pacific Institute if you take the entire coastal economic assets that are at risk from a combination of sea level rise and lowland flooding two-thirds of those economic assets are here in the San Francisco Bay Area; one-third covers the rest of the entire Pacific Coast.

Using 2010 numbers the value of economic assets at risk within the San Francisco Bay Area was \$100 billion and the rest of the entire Pacific Coast was \$50 billion.

If you put it into today's dollars you use the USGS tool that exists on their database the economic assets in the Bay Area are now at \$150 billion at risk; that's shoreline assets at risk from a combined sea level rise and lowland flooding.

This report essentially calls for allocating approximately \$100 million over five years. That is a very, very modest \$20 million over five years but it provides a suite of specific steps that will greatly enable local government officials, NGOs and community groups to better collaborate to do the very type of work that groups like BCDC, the Restoration Authority, MTC/ABAG and the Regional Water Board are trying to cooperatively coordinate in doing.

I think there is very high-level support there. I believe the Bay Area's, 27-member delegation, our state delegation, our Bay-Area caucus should be encouraged to take the lead in implementing and moving legislation to try to implement this report.

This report is a perfect blueprint that accurately defines the problem and provides a specific set of solutions. It is a great blueprint to help make the Bay Area a national model of how an urban region of eight million people at the edge of the sea can tackle the challenge of climate change.

I strongly encourage you to read it. I think it is a great report. And I urge you to urge our state legislatures to take the lead because we are ground-zero statewide for this issue. Thank you.

Chair Wasserman continued: Questions or comments from Commissioners.

Commissioner Finn commented: On behalf of the governor's administration acknowledge that in his budget last week the governor recognizes these serious issues and has proposed an approximately \$5 billion climate resistance bond of which \$500 million is set aside for specific sea level rise activities.

This is beginning many of the things that Rachel talked about such as planning and some demonstration projects and wetland restoration to begin addressing this statewide issue that we are all faced with.

Commissioner Eckerle was recognized: Rachel I want to thank you for all your hard work on this report and spending the time to interview all of the players across the state who are critical in helping us move forward on this together.

It is really important to continue to elevate this issue with the Legislature. So thank you for that.

I want to thank Karen for raising the Climate Resilience Bond. I wanted to flag that while we recognize that implementation happens on the ground at the local level there still remains so much to be done at the state level.

With regards to public outreach and awareness through the state Sea Level Rise Leadership Team the Ocean Protection Council is helping in leading a pilot sea level rise communication strategy in partnership with BCDC and the Coastal Commission and State Lands and others to think about what are those key messages that are going to resonate not only around what the impacts of sea level rise are but what are those strategies and actions that we can take to begin to prepare and adapt?

This is one small piece and we hope that it can serve as a consistent, over-arching method for how we are communicating about sea level rise across the state.

Secondly, I wanted to let everyone know that on January 23rd Secretary Crowfoot is hosting a director-level, state-agency, working meeting to develop a shared vision and framework and principles for continued statewide action on shoreline resilience to sea level rise. This is really elevating this at the executive level so that we can continue to move forward and help support the important work that is happening on the ground.

Commissioner Pine commented: I had the opportunity to attend the forum that Warner described and there was a lot of good feedback from the various stakeholders. I do urge everyone to read the report because it summarizes a lot of things that have happened and it is very accessible and well organized. We really appreciate your work Rachel.

One of the biggest challenges facing the Bay Area is moving from assessment to actual adaptation implementation. I like one of the recommendations to provide funding to pilot new techniques. We talk a lot about novel, green, infrastructure approaches and we need to get some of these things prototyped. I am particularly happy to see that as one of the recommendations.

The report does really put the focus on local action with the assistance of the state. My personal view is that the magnitude of the adaption challenge is such that state funding will be needed to actually get these projects done. We can't expect the state to fund the full bill but I do think we will need to look to the state for some help. And the Resiliency Bond certainly has some examples of that.

But once again this is really a great report and it is exciting to see the Legislature more and more interested. Just to repeat – the Assembly Select Committee on Sea Level Rise will meet in Foster City on February 7th at 1:30.

Despite the fact that the vulnerability or the risks or the potential damages are so much greater in NorCal the actual leader of this new Assembly group is a Southern California Assembly Member. I think that is good in the respect that SoCal is really important to engage because that is where so many Assembly Members reside. So in any event we are starting to see more of a statewide interest.

Commissioner McGrath spoke: I also appreciate this and the presentation today. There is one thing missing that I would like to see brought into higher focus and that is the importance of the role of Caltrans.

I see that in Berkeley and Oakland and Emeryville and Albany where I am fairly close to these issues because the freeway not only acts essentially as a levee – the undersized culverts protect the upland area from Bay flooding and exacerbate fluvial flooding.

That has to be changed very carefully. Caltrans is overwhelmed by the magnitude of this problem. And some of the places that are most at risk – I mean, there is work being done on Highway 37 but we have all the toll plazas, we have 101 in Marin and we have 101 down the peninsula. Those are going to be at the leading edge or at the bleeding edge as they say. So I would like to see a little more focus on the need.

You've got an operational agency that is seriously challenged in just maintaining the facilities that it has. It is very hard for all organizations like public works departments throughout the Bay Area to look up because they don't have enough funds and they don't have enough political support to do what they have to do right now.

So looking up is very difficult and I'd like to see you help the Legislature bring that into focus and realize how significant of a problem it is. Those highways that I mentioned are the economic lifeblood of this region and we can't lose them.

Ms. Ehlers was recognized: I should have mentioned at the outset that we focused this report on how the state can help support locals and said explicitly at the beginning that it doesn't include what the state is focusing on state-area responsibilities but that needs to happen too. And that is probably report number two because it is not just Caltrans although they are one of the majors. It is also State Parks who owns a third of the coastline. It is DWR, the Department of Water Resources, who is in charge of a lot of the levees through the Central Valley that are part of the Bay Estuary.

So the state has a lot of work to do on its own areas of responsibility as well. That just wasn't the scope of this report but I think Commissioner McGrath's point is very well taken and even within the local government realm if these collaborative groups are working together Caltrans needs to be at the table in part of those collaborative groups as well.

Commissioner McGrath agreed: Right. And none of those local governments if they are determined to seek their own interest can begin to alter those flood systems that go through the Caltrans facility without Caltrans there.

So that cooperation with entities that have a different sense of urgency and different sense of timing is particularly problematic.

Ms. Ehlers added: Along with the utilities as well and the federal government. There are some key partners that local governments can't control and are going to need to be at the table. That is an excellent point.

Commissioner Pemberton commented: This is a really well done and well researched report and a wonderful presentation. So I really appreciated it.

I was wondering if you anticipate doing any kind of follow-up report in a year or so on legislative activity that has happened this year or in following years to implement some of the recommendations.

And I was also wondering if you could talk a little bit about how the Legislature has responded so far to the report and if there are bills or movement that you see that might be coming down the pike sparked from this.

Ms. Ehlers replied: In terms of follow-up I'm not sure yet. We don't typically do a post mortem kind of what happened other than on the budget. We do put out a state spending plan that summarizes everything that is in the budget but not on legislation. That is not something our office usually has the resources to do.

I think we will just wait to see if there is more work to be done in a year or two and some has been done but some big next steps emerge that we think a follow-up report would be helpful – maybe.

In terms of interest on the part of the Legislature – it's funny because the legislative calendar is very different from like the yearly calendar. When we put this out in December they were not there. They just came back last week. A lot of them are hearing about it for the first time.

We have been doing some briefings and I think there is interest by some in terms of legislation. I'm not sure yet but there is some interest but it is just starting because the legislative calendar just started for the year.

Commissioner Ahn was recognized: I appreciate on page six the reference to vulnerable populations like renters and low-income folk, limited-mobility and limited-English-proficiency speakers.

Have you already settled on a definition? I know there is CalEnviroScreen which has been brought up in the past around disadvantaged communities or DACs. Have you settled on a legislative term-of-art that you want to adopt?

Ms. Ehlers responded: No. And it does vary. There are these different definitions and the Water Law defines disadvantaged communities in a different way than CalEnviroScreen defines vulnerable communities.

So there are a lot of definitions floating around. There are a lot of different opinions about whether that is helpful or not and whether there ought to be one definition or not.

For the purposes of our recommendations we are really not trying to necessarily draw walls or concrete definitions around those populations other than to say; in general the table needs to be big and wide and people need to be at it. When we get to the point of designing

programs and grants if there are requirements that include outreach to certain communities and potentially extra funding and technical assistance to those communities, we will have to start getting into some of the definitions.

There are a lot of policy trade-offs around the different definitions that are floating out there.

Executive Director Goldzband commented: When Rachel called me up and said, Larry we are going to do this report; BCDC jumped at this and we were really pleased that the Legislative Analyst Office really saw this as a real upcoming issue. And we were certainly happy to help.

There are a couple of things that I want to make sure you know. Commissioner Pine and Warner Chabot and I were at the Bay Area Caucus meeting last week which was held in Sonoma. And the last hour and a quarter of that meeting was devoted to rising sea level issues.

So the LAO Report distributed and nobody had seen much of it at all. Assemblymember Quirk led the discussion and there is a strong consensus on that in the Bay Area Caucus that they need to be active and unified.

I would suggest and given that BCDC is part of the Executive Branch but I would suggest that each of you who are county supervisors or members of local city councils read the report and urge your colleagues in your counties to talk with the district staff of your members of the Assembly and Senate and, if not, invite over members themselves when they are on break from Sacramento and talk about the report, talk it up and get them to think seriously about what your county and your city sees as the major challenges and put that against what Rachel has seen statewide because there is no doubt that the Bay Area's needs are different than San Diego's in some respects or Eureka's and Humboldt County's in some respects.

What the State Legislature is going to have a real hard time grappling with is how you create a statewide program that has locally-tailored aspects to it that allow the different regions to get what they need because each faces different issues whether it be Fresno and Bakersfield and Sacramento and Redding versus the coast, north coast versus south coast, open coast versus the Bay – you name it.

I would urge you all to take your own governmental-relations expertise locally and really press that on them. Thank you.

Chair Wasserman added commentary: I would like to echo the appreciation for this report. It does address many of the specific issues we need to focus on. But perhaps more importantly, at a statewide level, it really does emphasize the issues of rising sea levels and, yes; they are caused by and are a part of our comprehensive concern about and efforts about overall climate change and global warming.

But the fact that if we were miraculously able to stop greenhouse gas emissions tomorrow we would still have to face this problem because we have passed the tipping point worldwide on the causes of rising sea level.

And this Commission has and will continue to exercise significant leadership on addressing these issues by no means alone. We are not doing it alone. We cannot do it alone. We have no intention of doing it alone. But as the regional agency for the area in the state is the most threatened and will be the most impacted – we are continuing to lead as best as we can the cooperative effort to do this.

Our next item on the Agenda will certainly address that. But this is a terrific report and terrific tool in helping to get and focus attention of the Legislatures but also the locals.

I would echo but expand slightly on Larry's request that the elected officials on this body not only work on contacting their representatives in the Legislature but also make sure that your administrative and planning staff have this and make sure they not only have it but they actually look at it and they come back and talk to you about it because this will infuse the communications to the Legislature but also it will give strength to the very issues that this report addresses because this is a very significant and complex challenge in that at the end of the day it is the local jurisdictions that are going to have to act and approve actions but the water and rising sea levels are no respecter of jurisdictional lines. So it is unquestionably a regional issue.

And the problems that are particularly impacting the Bay Area make it even a bigger issue for our region. So I thank you. We will continue the dialogue I am sure. Thank you very, very much.

**12. Briefing on the Adapting to Rising Tides (ART) Bay Area Program.** Chair Wasserman stated: Item 12 is a briefing on the Adapting to Rising Tides ART Bay Area Program. Dana Brechwald will provide the staff briefing.

Executive Director Goldzband added: We decided to schedule Rachel in front of you all knowing that the ART Bay Area Project would be coming to you in the same day. So, you are getting a wave of information about rising sea level.

I want to let you all know that the ART Bay Area Project has not been released yet and it is not going to be released until next month. This is a preview. This is a preview of coming attractions, a trailer. Take a look at this and gasp when you want to gasp but know that Caltrans and MTC and BCDC are working on a release program that will also involve each one of you elected officials.

Senior Environmental Scientist Brechwald presented the following: My name is Dana Brechwald and I am the Program Manager for the Adapting to Rising Tides Program here at BCDC. I am so happy to be sharing the results of the ART Bay Area Project. Setting up in this way is actually quite helpful as Rachel has laid out a lot of the things that we need to be considering as a region and as a state.

My hope is that you will see that the ART Program and ART Bay Area is thinking about a lot of these issues and setting up the region to do a lot of this work.

This is a culmination of a number of initiatives that have taken place not just within BCDC but within the regional agencies as a whole. The real kick-off here is the 2011 Climate Change policies which spurred the creation of the ART Program. We did the policies for a rising Bay, a series of Commissioner workshops, the first regional, collaborative report as the Raising

the Bar on Regional Resilience which was led by BARC and included MTC/ABAG and BCDC. And then ART Bay Area has been going on for a while now. And we have been working on our Bay Plan amendments over the past year as well.

I also want to mention that parallel to a lot of this happening is the Horizon and Plan Bay Area process. So there is a lot of regional thinking and a lot of regional work that is going on that has led us to this point.

We know that things are going to get bad and also this is a good picture of the King Tide flooding that Schuyler took. The impacts are not just going to be to the built environment that exists now but a lot of what I will be talking about today is the stuff that is going to be built in the future. We are at a point right now where the decisions that we make impact what is going to be built.

If we don't address that, not just on a site-by-site basis, but on a citywide and region-wide basis, we are going to create a world of winners and losers in the Bay Area when it comes to sea level rise.

At ART we used the One Map/Many Futures approach. This illustrates combinations of sea level rise and storm surge that could add up to any given total water level.

On this slide, 24 inches total water level could represent 24 inches of permanent inundation or it could represent storm surge from a five-year storm or a combination of both of those items.

ART Bay Area is the first collaborative, multi-agency, regional, sea-level-rise project funded by Caltrans and the Bay Area Toll Authority, with a project management team that consists of MTC/ABAG, BARC and BCDC primarily staffed by BCDC. I want to give a huge shout-out to the ART staff that is in the room right now who have been working on this and we would be nothing without this staff so thank you all for being here.

We had a team of consultant's support that helped us out as well with some technical studies and community engagement. I also want to give a special shout-out to the community groups who participated in this process with us. The Bay Area Regional Health Inequities Initiative engaged Nuestra Casa, Ensuring Opportunity, and Youth United for Community Action in developing this project.

It is important to note here that because this was multi-agency and collaborative it was really designed to speak to the existing regional planning tools we have like Plan Bay Area.

One thing that is really unique and interesting about this project is that we have this wonderful Regional Working Group. So over the course of this project we've done 12 Regional Working Group meetings throughout the region with a wide variety of stakeholders. We have over 600 stakeholders on our mailing list to build capacity around the region for this type of work, be transparent with our process and our findings and, most importantly, build up a prime stakeholder group that is really ready to take action.

ART Bay Area is the first time that a study has looked at the vulnerability of the region as a whole. We did this through looking at four regional systems.

We looked at transportation; vulnerable communities; future growth areas, which we are representing with priority development areas and priority-development eligible areas; and natural lands, which are represented through priority conservation areas. We also did look at other natural land databases because we know that the PCA doesn't cover everything that is important in the region.

We started by understanding how these systems were exposed across the region as a whole. And then we zoomed into scales that were a little bit more manageable and understandable to local jurisdictions to better understand how these systems overlap and share vulnerabilities due to co-location.

This resulted in the analysis of 15 regional, data sets and 32 zoomed-in, focus areas. I am going to walk you through some of the key results from the regional assessment.

We framed our regional assessment with these three questions. For question number one we identified areas of exposure, number of miles of freeway, acres of habitat and stuff like that.

For question number two we developed a data-driven system for measuring consequence using what we called, "consequence indicators" which summarize and rank consequences to the region as a whole through a numerical value.

And then lastly we asked, what is the qualitative, big picture that emerged from all of our regional and local analysis?

So there are 32 different indicators across all four systems. I will give you some examples. So for highways one of the things we measured was how many average, annual, daily trips would be impacted if a segment of the highway was flooded?

For priority development areas we measured how many planned housing units and jobs would be impacted if the PDA was flooded?

For PCAs we measured loss of endangered species habitat by acreage. And for vulnerable communities we measured 10 indicators of social vulnerability as well as the presence of contamination.

Looking first at the regional picture around future growth areas given the current housing crisis building new housing units is essential for the region. And jurisdictions are actually planning for large numbers of new housing within priority development areas but, many of these areas could be impacted by sea level rise.

And even PDAs that are not fully inundated—there are no PDAs that are fully inundated—will feel impacts even with just a little bit of flooding. So that is why we say "impacted" instead of "flooded".

So any PDA that has any amount of exposure, we will need to plan for this.

So this graph shows the number of planned residential units and PDAs that may be impacted by sea level rise. At 12 inches of flooding the picture looks pretty good; only 260 planned units could be impacted. But this jumps quite a bit by 36 inches to nearly 60,000 units. And at 108 inches this jumps to over 140,000 new housing units that could be potentially be flooded.



These will either have to be not built or built somewhere else.

Where does this happen? The sooner it shows up on the left of this slide the sooner it gets wet. The darker the color is the more units could get wet.

So early on in the downtown San Rafael PDA is impacted first. And while flooding in that area will always significant, local impacts by 108 inches only 720 new units may be impacted as compared to North San Jose which has nearly 24,000 new housing units that could be impacted by 108 inches.

Other high-impacted PDAs include the Bayview Hunters Point Shipyard, Candlestick Point PDA in San Francisco and the Coliseum Bart Station Area PDA in Oakland.

So looking at one of the 11 indicators for natural lands, but one of the most pressing issues right now that we need to address before they drown – let's look at what is going to happen in tidal-marsh habitat due to rising sea levels.

This is within PCAs only. Obviously there is tidal marsh that occurs outside of PCAs as well. So no surprise that tidal-marsh habitat is hit early and reaches peak impacts pretty quickly.

At just 12 inches nearly 18 of the estimated 77 square miles of tidal-marsh habitat region-wide becomes inundated within PCAs. This keeps going up to a total of over 20 square miles at 108 inches.

And tidal-marsh habitat is critical not just from an ecological perspective but because it can provide flood protection for the assets of communities behind it as well.

So where in the region does this occur? The worst impacts occur in the North Bay in two priority conservation areas in Napa County, in Point Edith Wetlands in Contra Costa County, Sonoma Baylands and the Baylands PCA in the South Bay.

Looking at a transportation indicator that we looked at which is the region's freeways that are the primary means for getting people to and from jobs, services, recreation, and schools and impacts could be really significant for the region.

So at 12 inches over 680,000 daily vehicle trips could be impacted by flooded sections of the freeway system. These trips would need to be rerouted to other freeways, local roads, alternative means such as rail or ferries or they simply might not be made. People might stay home from work. They might not go to buy the things they need to buy or buy the services they need to buy.

So given the degree of traffic volume we are already seeing and the lack of redundant capacity in our systems this degree of impact would be extremely disruptive not just to residents but employers and the economy.

At this keeps jumping higher and higher. By 108 inches this number jumps to nearly 12.3 million daily vehicle trips that could be impacted.

Early on this disruption occurs primarily in Marin and Sonoma Counties as we already see these areas flooding today. Here you see U.S. 101 in Marin and 580 in Marin, the Richmond Bridge touchdown and SR 37 in Sonoma.

But by 48 inches the impacts are felt throughout the region. Some of the biggest impacts are on U.S. 101 in San Mateo, 880 and 80 in Alameda and 101 in Santa Clara County.

So lastly I want to look at contamination. We looked at areas that had contamination that were co-located with socially vulnerable residents. Contamination is a huge concern as sea levels rise because a lot of our contaminated sites might not be remediated to a standard that would prevent contaminant mobilization if the site gets wet.

Add social vulnerability and exposure to flooding on top of that and this really points to areas where we need to pay extra attention to the residents and their ability to make empowered choices about what to do.

While only 1,700 units of socially vulnerable residents may be impacted by contamination and sea level rise at 12 inches this grows to over 50,000 residential units at 108 inches. It is really critical that the region supports the ability for these communities to adapt and not suffer disproportionate impacts.

Many of these sites align with former military or industrial spaces. There is going to be a 700-page report coming out pretty soon and you can find detail in the report.

Early on the greatest impacts occur in Marin County and the Canal District in San Rafael as well as Alameda Island, Martinez, Vallejo and East Palo Alto.

Another really important thing we looked at was co-located vulnerabilities that have been identified as high significance to the region.

We got to these clusters by layering the top-five, highest-consequence indicators for each system over each other and then flagging areas that contained at least one, top-five transportation asset, at least one PDA or PCA with a high-consequence indicator and the presence of a vulnerable community.

Here we have mapped the highway segments with the most auto and truck, average annual, daily trips that will get wet at 36 inches of total water level.

So now we have added the top-five passenger rail segments and stations on top of that. Now we have added high-quality bus routes and so on until we've added all the top-five, transportation assets for all the types we measured. This includes freight rail, Bay Trail, regional bicycle networks, airports, seaports and ferry terminals.

Now you see we layer in priority conservation areas that have at least one of the top-ten indicators that rank in the top five which are things like habitat, stormwater, carbon sequestration, visitation or agriculture. And then we add in PDAs that are significant in terms of existing and planned housing and jobs. And lastly we add in vulnerable communities.

We didn't rank vulnerable communities because we felt that they were all significant no matter how many or how few residents are within that community.

So here are the clusters that emerge at 36 inches total water levels. At earlier water levels there are fewer clusters. And at higher, total, water levels a few more clusters are added but many actually stay the same. So there are a few clusters that remain relatively constant over increased flooding, meaning that these point to areas that the region really wants to coordinate around.

What is driving any one of these individual clusters? I am going to jump into this Bayview cluster which is located in South San Francisco. So what is driving this cluster?

There is a PDA here, the Bayview Hunters Shipyard, Candlestick Point PDA and it ranks really high for total 2040 jobs spaces and residential units. It ranks number one in the region. It also ranks number two for the number of new, planned, residential units. So this is a really significant spot in the region.

It also contains the Port of San Francisco which ranks number three in the region for dollar value of imports and exports. But it also has locally significant Muni lines and station, bus routes and the Bay Trail.

It has 29 socially-vulnerable block groups and 20 of those are exposed to contamination. It also has PCAs which contain water trails and natural areas but none of those were ranked in the top five.

This is a prime example of areas where really significant assets are all overlapping and all going to get wet at the same time.

In addition to identifying clusters of regional significance we also did in-depth, local assessments of these 32 focus areas that were selected because of their local importance.

So these are areas where impacts will be felt by the end of the century and have interesting cases of the intersection of different asset types that would lead not just to cascading regional impacts but local impacts as well.

So these focus areas all have a vulnerability profile that is written up that describes their quantitative and qualitative vulnerability which will be in the final report.

Luckily many of the locally-significant areas that we looked at through this analysis overlap with the clusters we identified as regionally significant. So investment in these areas will have multi-scale benefits.

And then the last question is looking at what are the big-picture takeaways? What are the key issues that the region as a whole needs to look at? We got to these through the end of vulnerability assessments as well as looking at our regional analysis.

So the first one is looking at where local and regional transportation systems connect and flood together. So where does BART meet local lines? Where do a lot of transportation assets come together while people are changing modes and changing scales?

Sea level rise decision-making is complicated by ownership, governance, management and regulatory issues. Inter-connected local and regional emergency and critical service functions are at risk. So there are a lot of inter-jurisdictional agreements about emergency response that could be put at risk due to sea level rise.

Contamination can complicate and exacerbate flooding issues. This is a huge issue because we don't actually know what is going to happen to contaminated sites when they get wet.

Sea level rise will amplify existing housing displacement concerns. So looking at just one of the examples I gave you, if 24,000 planned units are not going to be built that is going to put a lot more pressure on the housing market.

But future development areas can be critical tools for resilience. So if something has not been built yet this is an opportunity for us. We can make different choices. We can build differently that increases or decreases resilience.

Sea level rise will put the pressure on the relationship between regional recreation and habitat. These are both frontline issues.

And then lastly near-shore habitats and the ecosystem services they provide are sensitive to sea level rise early on. This is important for many reasons for ecosystem services as well as the protection that it provides for the communities behind them.

So after all this analysis was done we developed more than 80 adaptation responses that respond to these eight key planning issues. And these represent actions that would benefit from coordination across jurisdictions and need to be carried out by a regional or state agency because they are too big for a single jurisdiction to handle alone or are well suited to an existing or possibly new regional or state tool or they are considered low-hanging fruit or standard best practices that any jurisdiction facing flooding could benefit from even if they haven't done an in-depth, vulnerability assessment.

So for each adaptation response we worked with our Regional Working Group to identify the timeline for each response to refine the description of the action that should be taken, identify the local, regional, state and federal partners that need to be involved. And then we categorized them based on type of action.

So one key component of the ART Program is that we don't just support the building of flood-control projects but we support capacity building, planning and policy changes, new programs, changes in operations and thinking about financing mechanisms not just as something to figure out once you've planned a project but looking at financing as an adaptation tool itself.

We are obviously not going to do all 80 adaptation responses tomorrow but these represent a catalogue of options that the region has at its fingertips to vet, discuss, make decisions about what is a priority and what the roles of different entities are in this.

So looking at the key-transportation planning issue, one next step would be to agree as a region on high-priority transportation nodes; areas where multiple transportation types and scales come together. We could easily run this analysis based on our consequence indicators.

We looked at where different types of assets intersect but we can also look at within each type of asset. And there might be areas that are very critical for regional and state agencies like MTC/ABAG and Caltrans to pay close attention to in cooperation with local transit agencies.

On governance we recommend that the region come together to advance a regional, shoreline, adaptation strategy as a platform for identifying shared, decision-making criteria and actions to ensure that local and regional adaptation projects all work together towards bigger goals.

ART Bay Area provides the critical groundwork for this strategy. But the strategy will really be the tool that catalyzes many of these responses into action.

For future growth areas we can help support resilient land-use planning as we build more jobs and housing using things like model ordinances and guidance documents to illustrate best practices for down zoning, clustering development, restricting development and high-hazard areas.

And then lastly we know that habitat like wetlands are critical to address soon. So this response suggests developing policies, guidelines, ordinances to provide setbacks and buffers for marsh migration space in a way that balances public access and recreation.

So what does ART Bay Area do? It provides definitive answers about what gets wet where and when. It provides data and a foundation to help guide regional and local decision-making. It doesn't make those decisions in and of itself but provides the information that we need to take on that next step.

I mentioned that the Regional Working Group helped build networks and local and regional capacity for climate adaptation planning and decision-making, and primes a region-wide group of stakeholders for action. Those 600 people on our mailing list are waiting to be told what they can do next. It also informs regional and local planning including Plan Bay Area.

So where do we go from here? We are already dealing with a huge crisis. One is impacting people now not at some vague point in the future. But we can't let the sea-level-rise crisis unfold the same way as the housing crisis has unfolded. We know about it ahead of time so we need a plan for it ahead of time.

But how do we balance multiple priorities at once when things are pressing today? We've seen in the housing crisis as well as recent wildfires; if we wait to fix problems they reach a crisis tipping point. We knew we weren't building enough housing but we didn't push to build more. We knew our infrastructure was old and that we weren't managing our forests but we still let billions of dollars of damage happen, thousands of units lost and people lost their lives.

What is going to push us to action around sea level rise? And what is the cost of inaction?

And then lastly how do we get to a point of agreement around the region about what our values and priorities are for adaptation so that we can make definitive decisions about actions? What do we do next and what roles do local, regional, state and federal agencies play?

So what you can expect next from us is we are planning on releasing the official report at the end of February. I mentioned that it is nearly 700 pages. So we are also doing a summary report. We are planning a last regional Working Group meeting to celebrate the end of this process. We will send the invitation out to all of you so that you can join us. And then we are going to do a regional road show.

So we want to talk to each one of you about coming to talk to your county, your constituents, your jurisdiction and how we can help support. We've got webinars, media planned, and lots of fun stuff.

I want to quickly mention these companion reports that will be coming out later in the year. We have a white paper on community engagement as well as our thinking on financing. We are updating our adaptation guidance to get to this question of – okay now you have all this data, how do you decide what to adapt where and when and how do you evaluate those decisions?

Executive Director Goldzband chimed in: One of the really marvelous things about my being your Executive Director has been seeing the ART staff not being seen because they have been everywhere and they have been huddled together for the past six months. It is like they had a final the next day for six months getting this report done. And they deserve immense credit for getting it done and getting it done well. (Applause)

The only thing I am going to talk about is number three. You are going to get an email from me that will tell you that Dana or Jessica is going to call you, not your staff, “you” – to connect you with the ART Team so that each county supervisor can put together in the month of March or April a county-wide meeting with county planners and city planners, environmental-justice advocates, habitat folks and anybody who deals with adaptation that will actually supply the coffee and Danish for and you will have the ability to have a half-day, deep-dive with the ART staff on your county so that you understand what we know and you can ask us questions, then after that we are going to put you together with the county supervisor next door and make sure that your planners know what the other planners know and you can start going like this because that is what we have to do during the next six months or so to make sure that everybody understands what the issues are and what the data is.

We put that in combination with what Rachel is explaining to us that the LAO wants the Legislature to do. And then the Bay Area has a story, a really good story about how a state agency using money from state and local agencies can help local governments figure out how they are going to work internally and externally.

Commissioner McGrath commented: This was very impressive.

Ms. Brechwald added: We are going to start the road show in March.

Executive Director Goldzband stated: This work is not available yet but it will be soon.

Chair Wasserman continued: The report itself is even larger and denser than what Dana has presented to us. We are working with Caltrans and others to figure out the most appropriate roll out.

What is in that report is the basic building blocks of what will be our regional strategy. We are also working at some level from the other end and convening at the end of this month or the beginning of February another meeting of the Advisory Board to this regional strategy which will talk about the over-arching purposes as well as the principles and guidelines.

We are simultaneously working on a regional advisory board of local jurisdictions so that we get the insight from and buy-in as well as the information flow from those local jurisdictions which are going to have to act in order to allow and prevent developments that should or should not occur.

We are going to try very hard not to make the mistake that the Casa proponents neglected the piece of talking to the jurisdictions that will really be affected.

You will clearly hear much more about this in the coming months. To some extent this is a major milestone in that effort that began in 2011. And one of the lessons of that is that these governmental processes take a long time. And the projects that are discussed in our vulnerability assessment take a long time as well and the water is not waiting.

We have a lot of work to do but this is a terrific milestone and you will be hearing more about it.

I thank staff very much for this very hard work; and you will be rewarded by more hard work in the future.

**13. Adjournment.** Upon motion by Commissioner McGrath, seconded by Vice Chair Halsted, the Commission meeting was adjourned at 3:05 p.m.